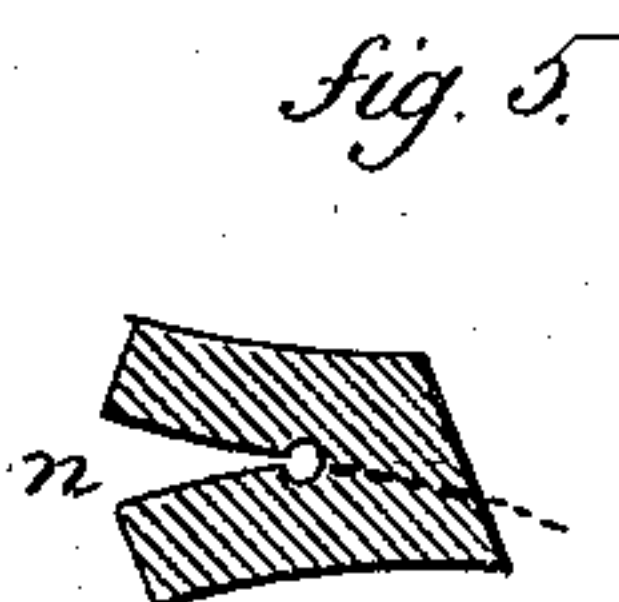
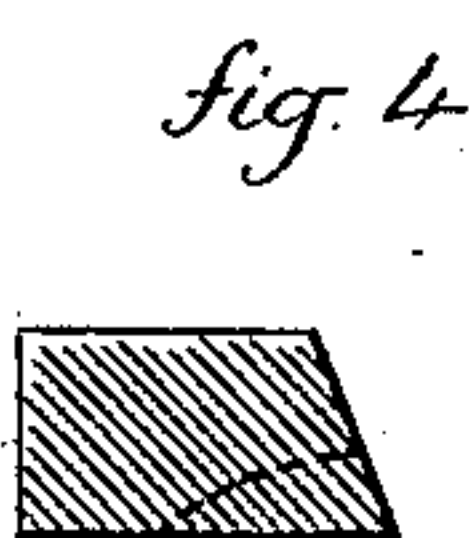
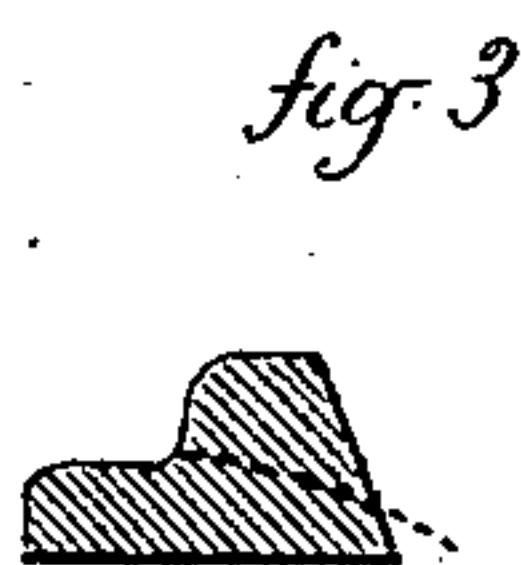
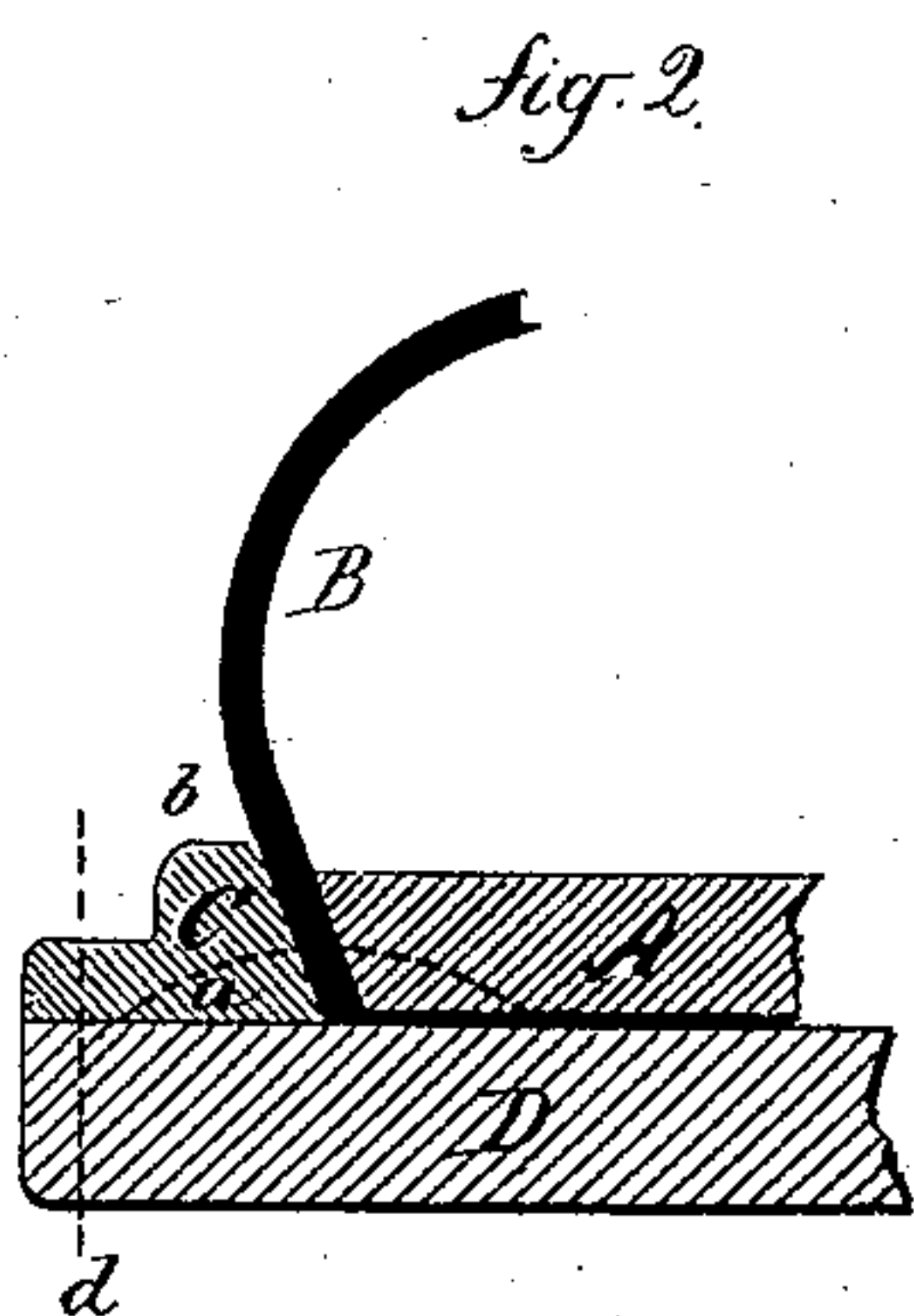
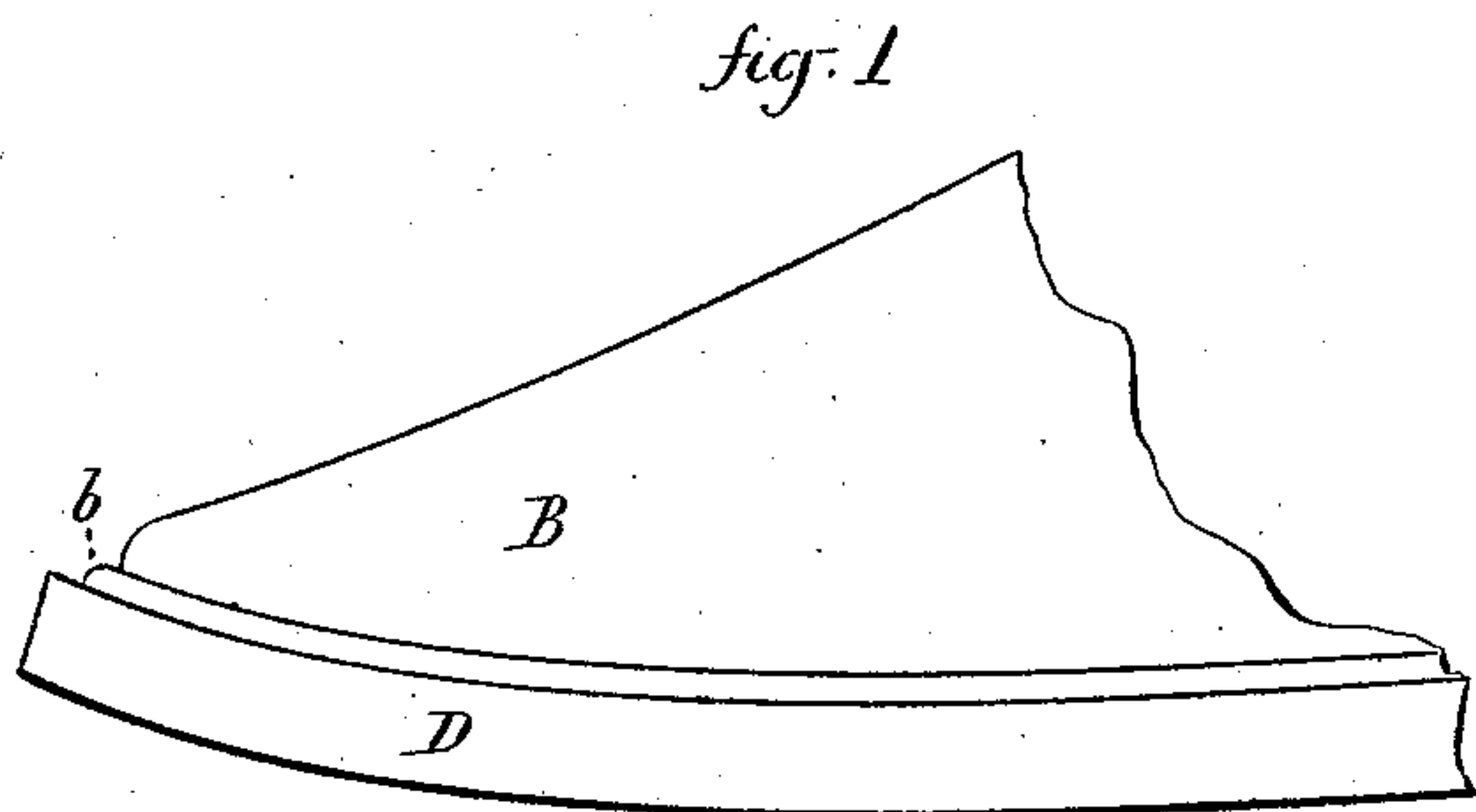


**J. L. JOYCE.**  
**Boots and Shoes.**

No. 146,912.

Patented Jan. 27, 1874.



Witnesses

*J. H. Shumway*  
*A. J. DePinto*

*Joseph L. Joyce.*  
 Inventor.

By Atty.

*Wm. S. Earle*

# UNITED STATES PATENT OFFICE.

JOSEPH L. JOYCE, OF NEW HAVEN, CONNECTICUT.

## IMPROVEMENT IN BOOTS AND SHOES.

Specification forming part of Letters Patent No. **146,912**, dated January 27, 1874; application filed December 27, 1873.

*To all whom it may concern:*

Be it known that I, JOSEPH L. JOYCE, of New Haven, in the county of New Haven and State of Connecticut, have invented a new Improvement in Boots and Shoes; and I do hereby declare the following, when taken in connection with the accompanying drawings and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, a side view; Fig. 2, a transverse section at one edge; and in Figs. 3, 4, and 5, modifications in the construction of the welt.

This invention relates to an improvement in the construction of what are known as welted boots and shoes; the object of the invention being to avoid the bending of the sole over the sharp edge of the insole, as necessitated in the usual construction; also, to avoid the necessity of bending or doubling the welt into an unnatural position after it has been secured to the insole and upper, preparatory to attachment to the sole. The invention consists in forming the welt with an inner edge, corresponding to the outer edge of the insole, and placing the lower edge of the upper between these two edges, and securing the three parts together in their natural position, preparatory to attachment to the sole, as more fully hereinafter described.

A is the insole, B the upper, and C the welt. The outer edge of the insole is cut perpendicular, or at any desired angle, preferably at a slight angle, the edge inclining outward, as seen in Fig. 2. The welt is cut from leather, preferably of a little more than the thickness of the insole, the inner edge corresponding to the outer edge of the insole, as seen in Fig. 2. The upper, B, is introduced between the welt and insole, and the three parts stitched together, as denoted by broken lines *a*, Fig. 2, so that, after they are stitched together, they retain the same position as when they are being stitched—that is to say, the insole and welt in the same plane. This done, the shoe is ready for the outsole D, and this is secured through the welt by a line of stitches, *d*, in substantially the usual manner, or may be by a sewing-machine.

The welt, if thicker than the insole, forms a projection above the insole, to protect the upper leather; but, whether it be thicker or

thinner, the sharp bend in the upper around the edge of the insole is entirely avoided.

A portion of the welt may be cut away outside, as seen in Fig. 2, so as to leave a portion, *b*, next to the upper, in the form of a bead around the sole, which adds much to the finish or appearance of the shoe.

Instead of stitching, as denoted in Fig. 2, where the thread is brought entirely between the soles, it may be done through the welt, as denoted in Fig. 3, the stitches coming through upon the outside.

The welt, if preferred, may be retained its full thickness, as denoted in Fig. 4, thus giving to the sole a heavy or doubled appearance. In using a full thickness of welt, it may be split upon the outer edge, as denoted at *n*, Fig. 5, and the stitching of the welt, upper, and insole may be done through this slit, leaving the stitches of the welt within the slit. A channel should be formed to receive the stitches. The slit will be closed and secured when the outer sole is secured to the welt, the stitches passing through both parts of the welt.

The advantages of this construction over the usual method are, first, the sharp angle of the insole, over which the upper is bent, is avoided; second, the welt, upper, and insole are secured together in their natural position—that is to say, the position they occupy when the shoe is finished. This avoids the crowding or turning down the welt to fasten the outside, and the consequent loosening of the stitches; and by thus combining the parts, a greater security and durability are attained, and the usual crease or groove between the upper and sole, and the consequent exposure of stitches, are avoided, and the upper is protected around the edge of the insole; also, a much heavier welt may be used, producing much stronger work than with the ordinary welt.

I claim as my invention—

A boot or shoe having the welt and insole in the same plane, and the upper between the inner edge of the said welt and the outer edge of the said insole, the said three parts secured together in their said positions, substantially as set forth.

Witnesses:

JOS. L. JOYCE.

A. J. TIBBITS,

J. H. SHUMWAY.